OIPE IAP28
JUL 05 2006
PATENT & TRADEMARK OFFICE

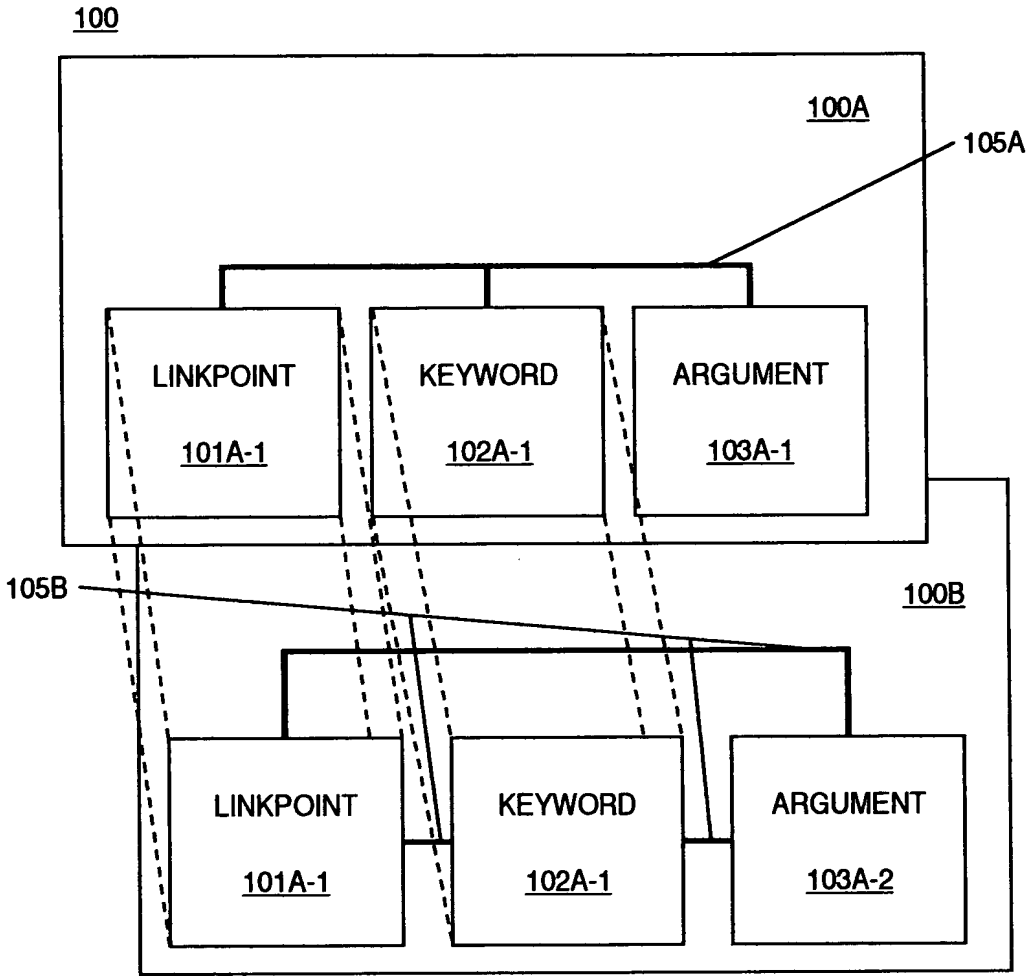

Fig. 1

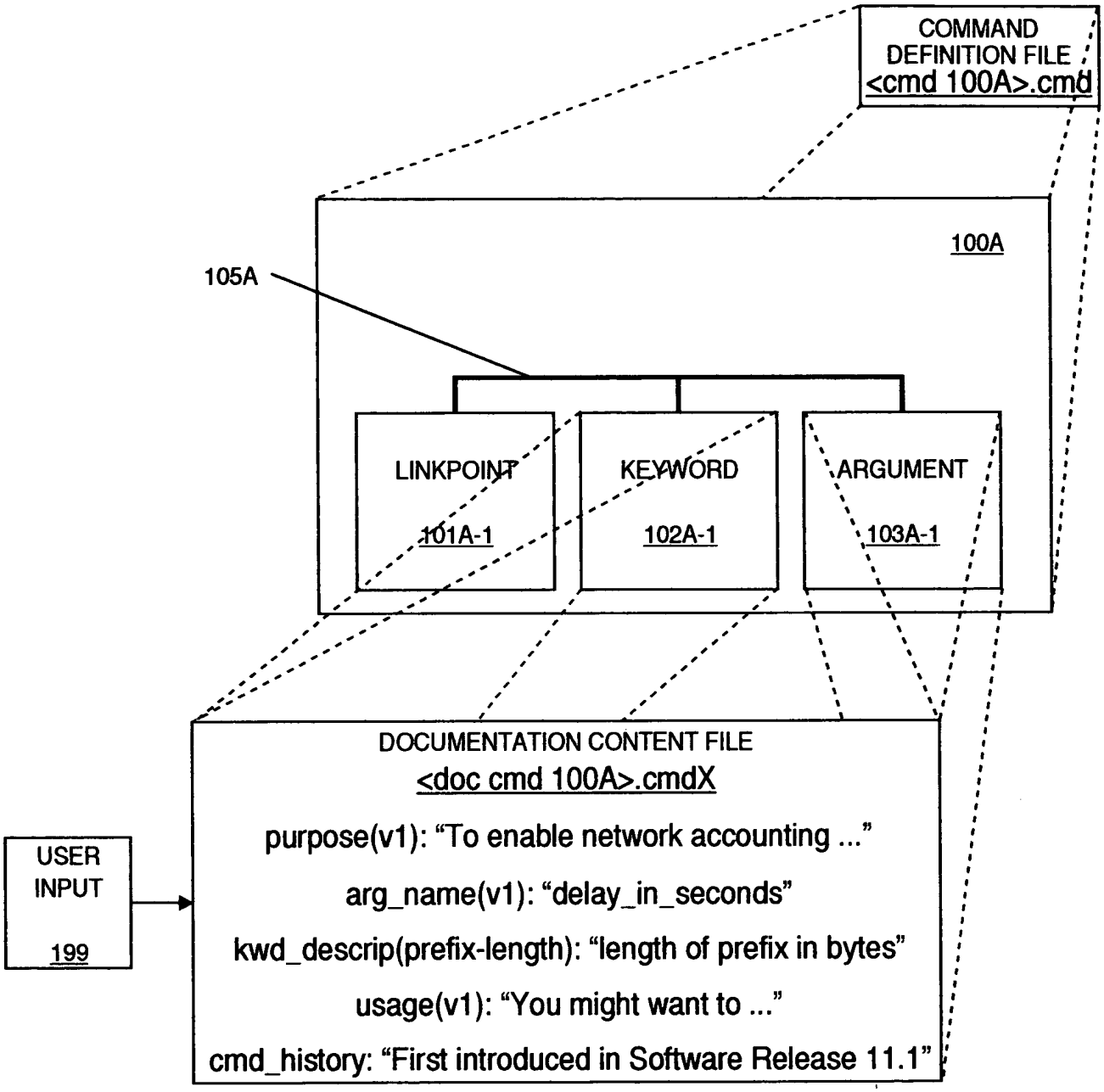
COMMAND DEFINITION FILE
<cmd 100A>.cmd
100A
105A
LINKPOINT
101A-1
KEYWORD
102A-1
ARGUMENT
103A-1
DOCUMENTATION CONTENT FILE
<doc cmd 100A>.cmdX
purpose(v1): "To enable network accounting ..."
arg_name(v1): "delay_in_seconds"
kwd_descrip(prefix-length): "length of prefix in bytes"
usage(v1): "You might want to ..."
cmd_history: "First introduced in Software Release 11.1"
USER INPUT
199

Fig. 2

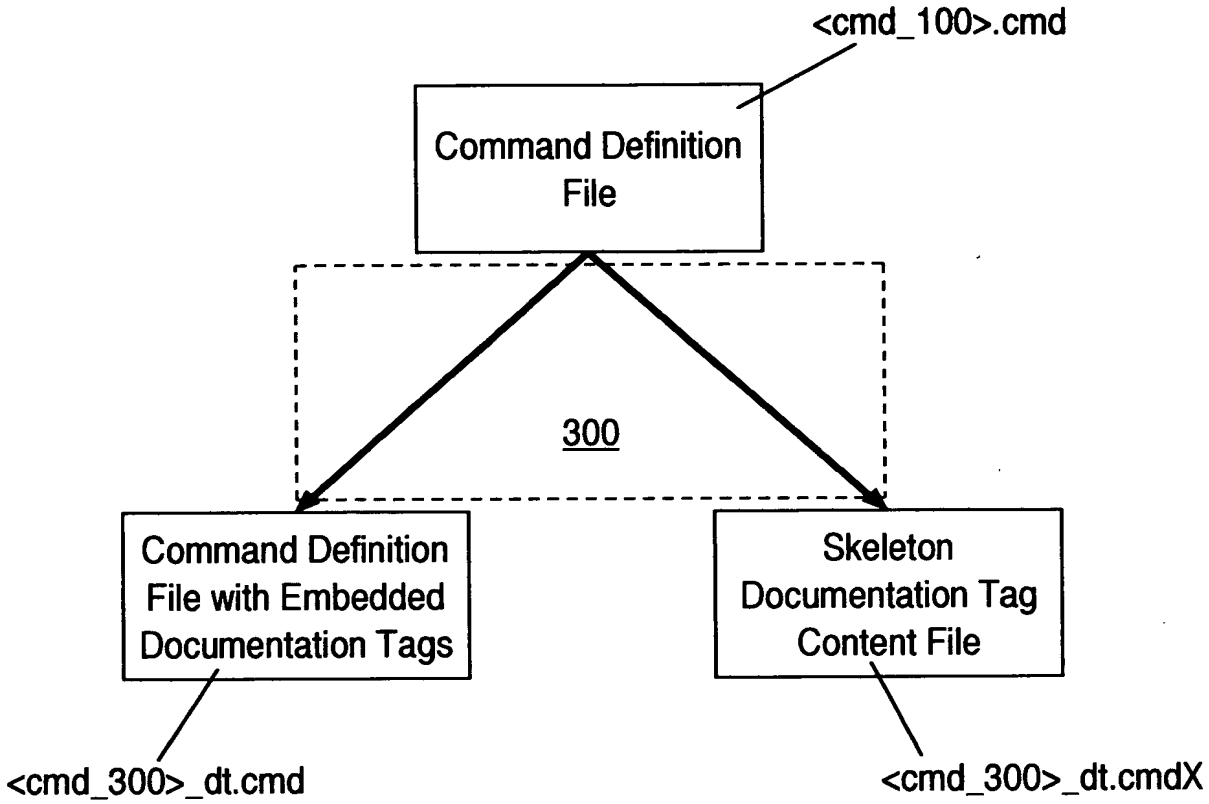
<cmd_100>.cmd
Command Definition File
300
Command Definition File with Embedded Documentation Tags
Skeleton Documentation Tag Content File
<cmd_300>_dt.cmd
<cmd_300>_dt.cmdX

Fig. 3A

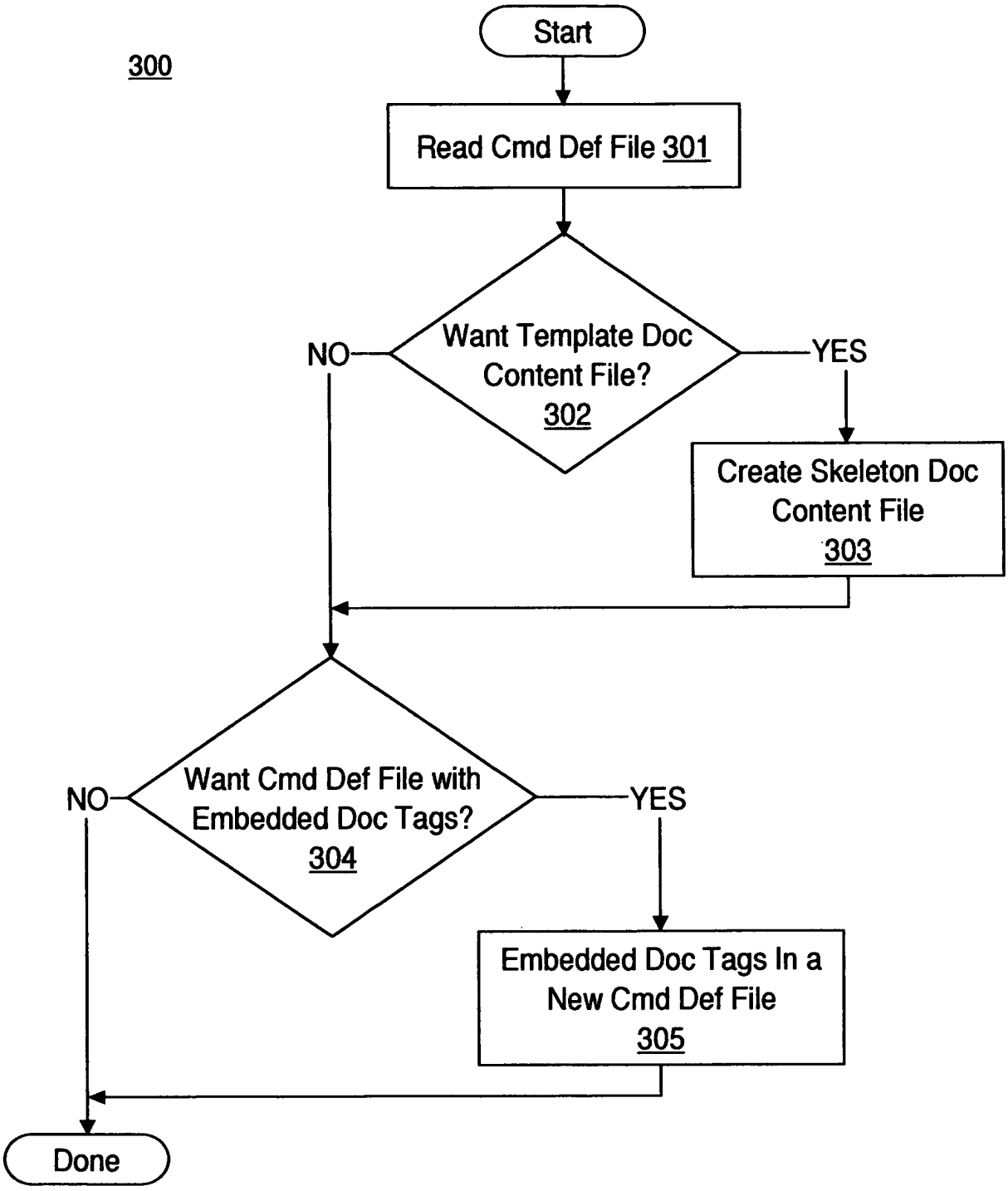
300
Start
Read Cmd Def File 301
Want Template Doc Content File? 302
NO
YES
Create Skeleton Doc Content File 303
Want Cmd Def File with Embedded Doc Tags? 304
NO
YES
Embedded Doc Tags In a New Cmd Def File 305
Done

Fig. 3B

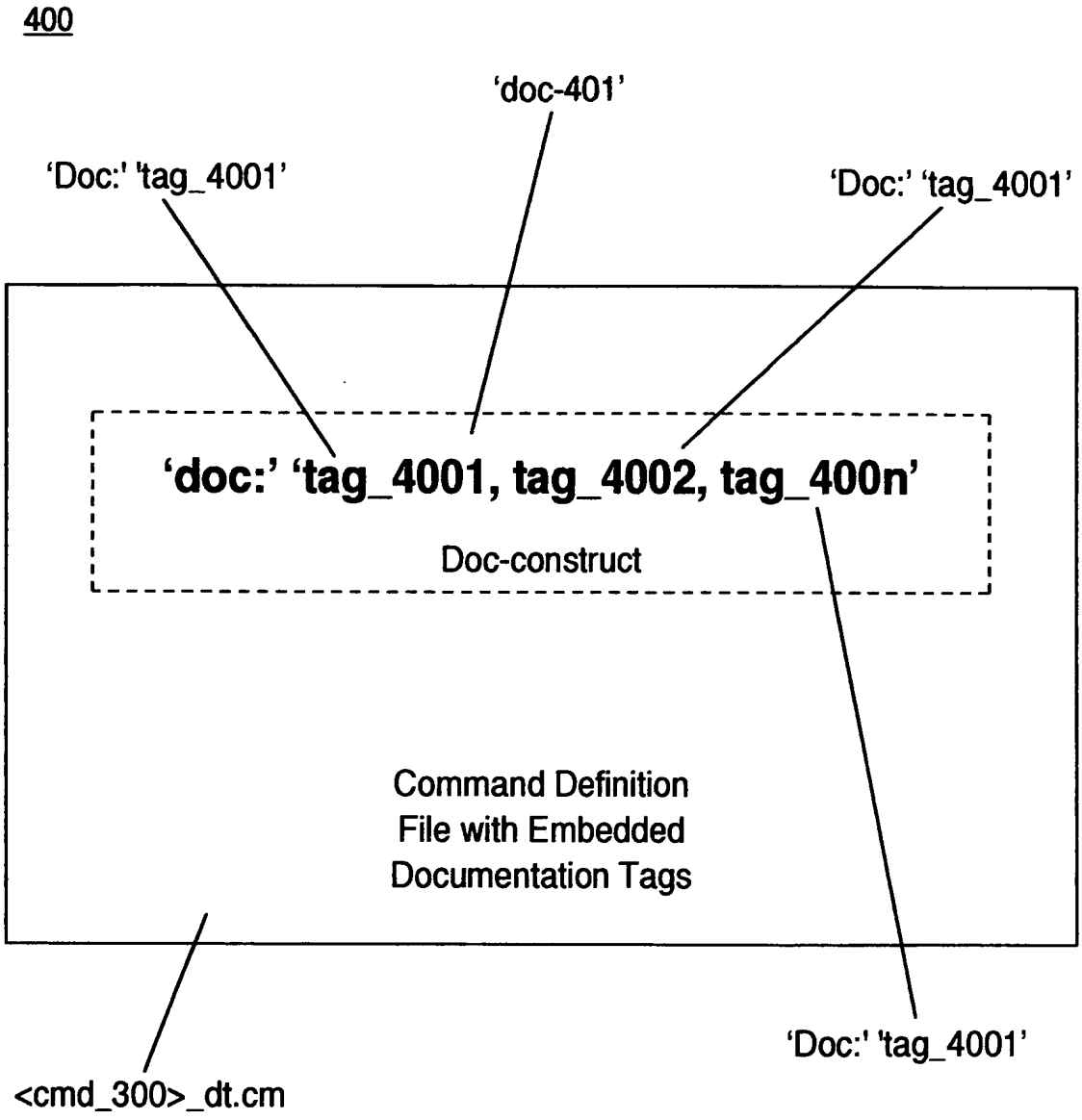
400
'doc-401'
'Doc:' 'tag_4001'
'Doc:' 'tag_4001'
'doc:' 'tag_4001, tag_4002, tag_400n'
Doc-construct
Command Definition
File with Embedded
Documentation Tags
'Doc:' 'tag_4001'
<cmd_300>_dt.cm

Fig. 4

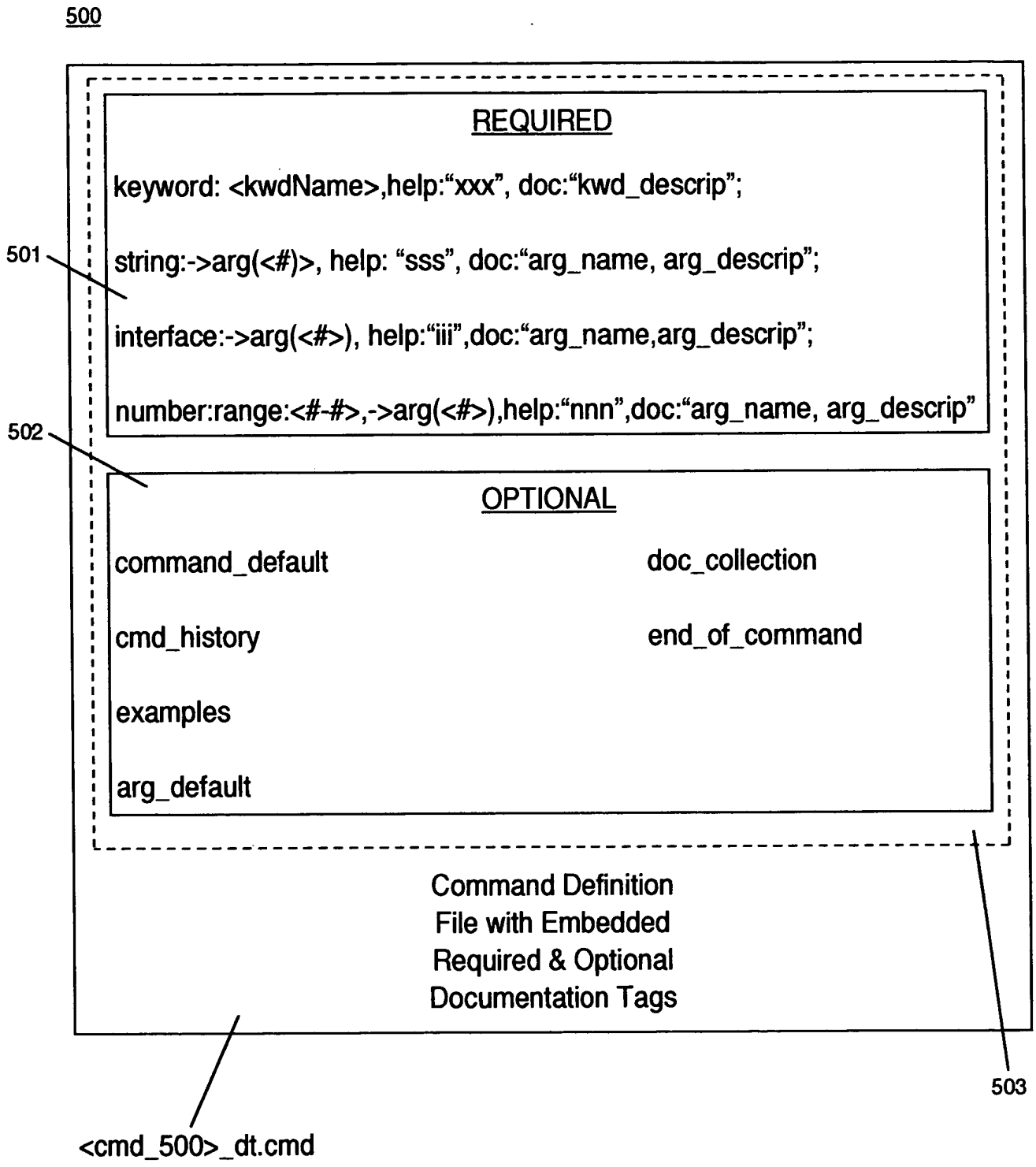
500
REQUIRED
keyword: <kwdName>,help:"xxx", doc:"kwd_descrip";
string:->arg(<#)>, help: "sss", doc:"arg_name, arg_descrip";
interface:->arg(<#>), help:"iii",doc:"arg_name,arg_descrip";
number:range:<#-#>,->arg(<#>),help:"nnn",doc:"arg_name, arg_descrip"
501
502
OPTIONAL
command_default
doc_collection
cmd_history
end_of_command
examples
arg_default
Command Definition File with Embedded Required & Optional Documentation Tags
503
<cmd_500>_dt.cmd

Fig. 5

601

REQUIRED TAGS after 'help' for Keywords and Arguments

keyword: <kwdName>,help:"xxx", doc:"kwd_descrip";

string:->arg(<#)>, help: "sss", doc:"arg_name, arg_descrip, arg_default";

interface:->arg(<#>), help:"iii",doc:"arg_name,arg_descrip,arg_default";

number:range:<#-#>,->arg(<#>),help:"nnn",doc:"arg_name,arg_descrip.."

602

OPTIONAL & REQUIRED TAGS in Document Collection Added before endofcmd

doc-collection:"purpose,cmd_default,cmd_history,usage,example,related_cmds";
endofcmd: ...

603

EXEMPLARY OPTIONAL DOC TAGS with Values from Doc Content File

command_default: "the default behavior is to turn logging off"

cmd_history(v1):"First introduced in release 11.1"

examples(v1): "Following is sample usage of and output from the 'show disk space' command:
>show disc space<filesystem1>Filesystemtotal-memory used unused
<filesystem1> 300M 50M 250M"

Fig. 6

CmdX documentation tag format:

<doc_tag_name>(v<variant-#>,<arg-#>):"<doc_tag_value>"

Exemplary CmdX Dog-Tags:

arg_name(v1, 3):"number of seconds to delay"
kwd_descrip(v2,format):"format a disk"
usage(v3):"This command is used to clear the cache"

Fig. 7

flash_fsck.cmd

```
chainname:  exec_flash_fsck;
chainpoint:  "exec";
linkpoint:    "";
privilage:    root;

/*
 *fsck
keyword:    fsck,
  help: "File system check for flash devices";

keyword:    nocrc,
  help: "Crc check not required";

string:
    -> arg(1),
  help:  "Name of flash Device";

endofcommand;
```

Fig. 8A

flash_fsck_dt.cmd

```
chainname: exec_flash_fsck;
chainpoint: "exec";
linkpoint:  "";
privilege:  root;

/*
 *fsck
*/
keyword:  fsck,
  help: "File system check for flash devices",
  doc: "kwd_descrip";

keyword:  nocrc,
  help: "Crc check not required",
  doc: "kwd_descrip";

string:
  -> arg(1),
  help:  "Name of Flash Device",
  doc:  "arg_name,arg_descrip,arg_default";

doc_collection:
"purpose,cmd_default,cmd_history,usage,example,related_cmds";

endofcommand;
```

Fig. 8B

flash_fsck_dt.cmdX

```
kwd_descrip(v1, fsck: "File system check for flash devices",
kwd_descrip(v1), nocrc): "Crc check not required",

arg_name(v1, 1):"<flash_device_name>"
arg_descrip(v1, 1):"Name of Flash Device"
arg_default:(v1, 1):""

purpose(v1):"to perform the <'fsck'> operation
  on the router nocrc information,
  use the <fsck nocrc> EXEC command."

cmd_default(v1):""
cmd_history(v1):"This command first appeared in Cisco IOS Release 1.0"
usage(v1):""

example(v1):"The following example shows the operation of the
 <fsck nocrc> EXEC command
 <fsck nocrc<flash_device_name>>

related_cmds(v1):""
```

Fig. 8C

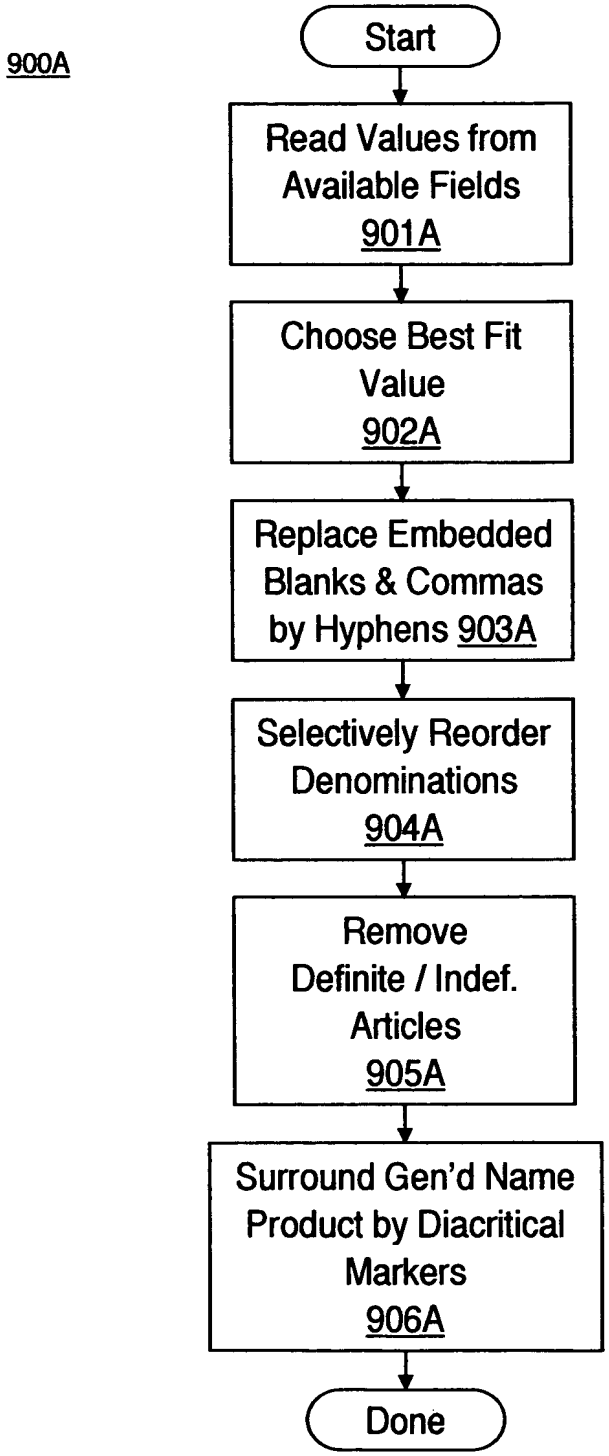
900A
Start
Read Values from Available Fields 901A
Choose Best Fit Value 902A
Replace Embedded Blanks & Commas by Hyphens 903A
Selectively Reorder Denominations 904A
Remove Definite / Indef. Articles 905A
Surround Gen'd Name Product by Diacritical Markers 906A
Done

Fig. 9A

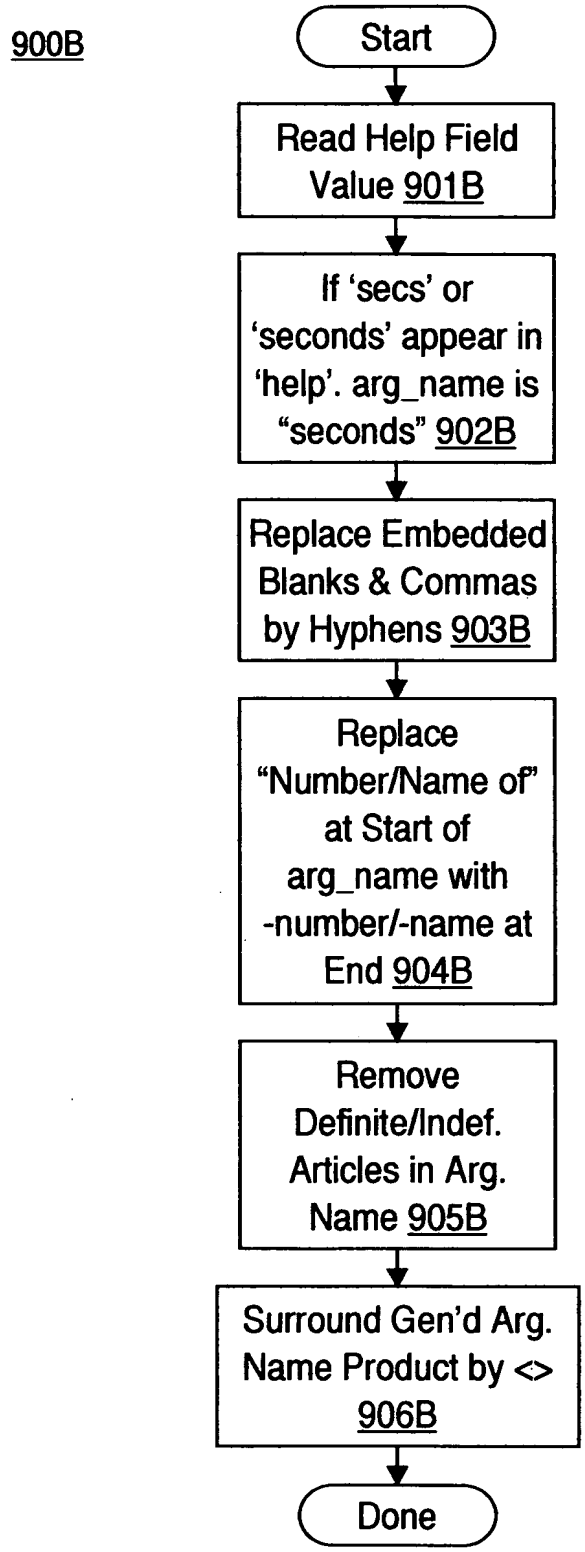
900B
Start
Read Help Field Value 901B
If 'secs' or 'seconds' appear in 'help'. arg_name is "seconds" 902B
Replace Embedded Blanks & Commas by Hyphens 903B
Replace "Number/Name of" at Start of arg_name with -number/-name at End 904B
Remove Definite/Indef. Articles in Arg. Name 905B
Surround Gen'd Arg. Name Product by <> 906B
Done

Fig. 9B

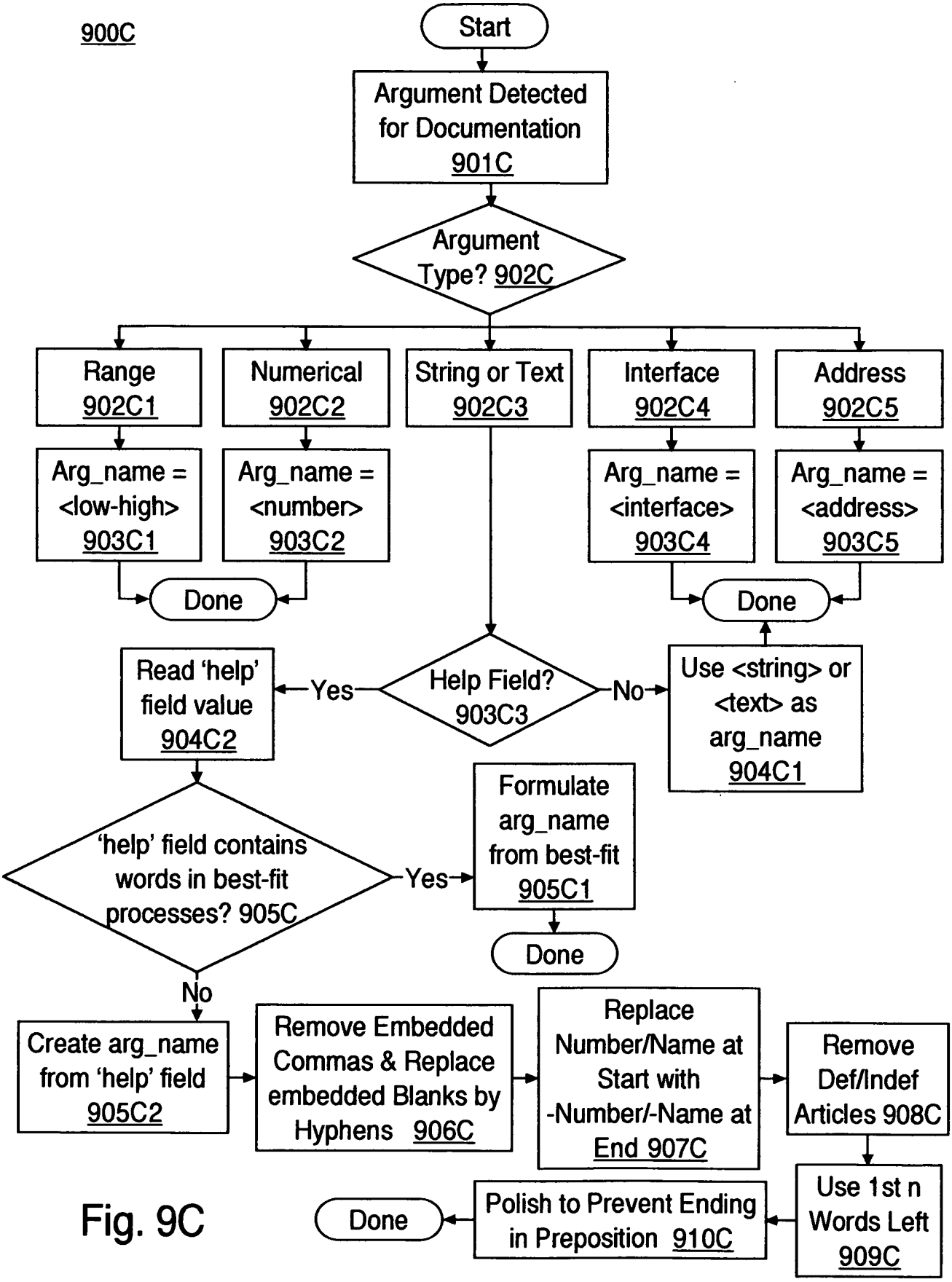
900C
Start
Argument Detected for Documentation 901C
Argument Type? 902C
Range 902C1
Numerical 902C2
String or Text 902C3
Interface 902C4
Address 902C5
Arg_name = <low-high> 903C1
Arg_name = <number> 903C2
Arg_name = <interface> 903C4
Arg_name = <address> 903C5
Done
Done
Help Field? 903C3
Yes
No
Read 'help' field value 904C2
Use <string> or <text> as arg_name 904C1
'help' field contains words in best-fit processes? 905C
Yes
Formulate arg_name from best-fit 905C1
Done
No
Create arg_name from 'help' field 905C2
Remove Embedded Commas & Replace embedded Blanks by Hyphens 906C
Replace Number/Name at Start with -Number/-Name at End 907C
Remove Def/Indef Articles 908C
Use 1st n Words Left 909C
Polish to Prevent Ending in Preposition 910C
Done

Fig. 9C

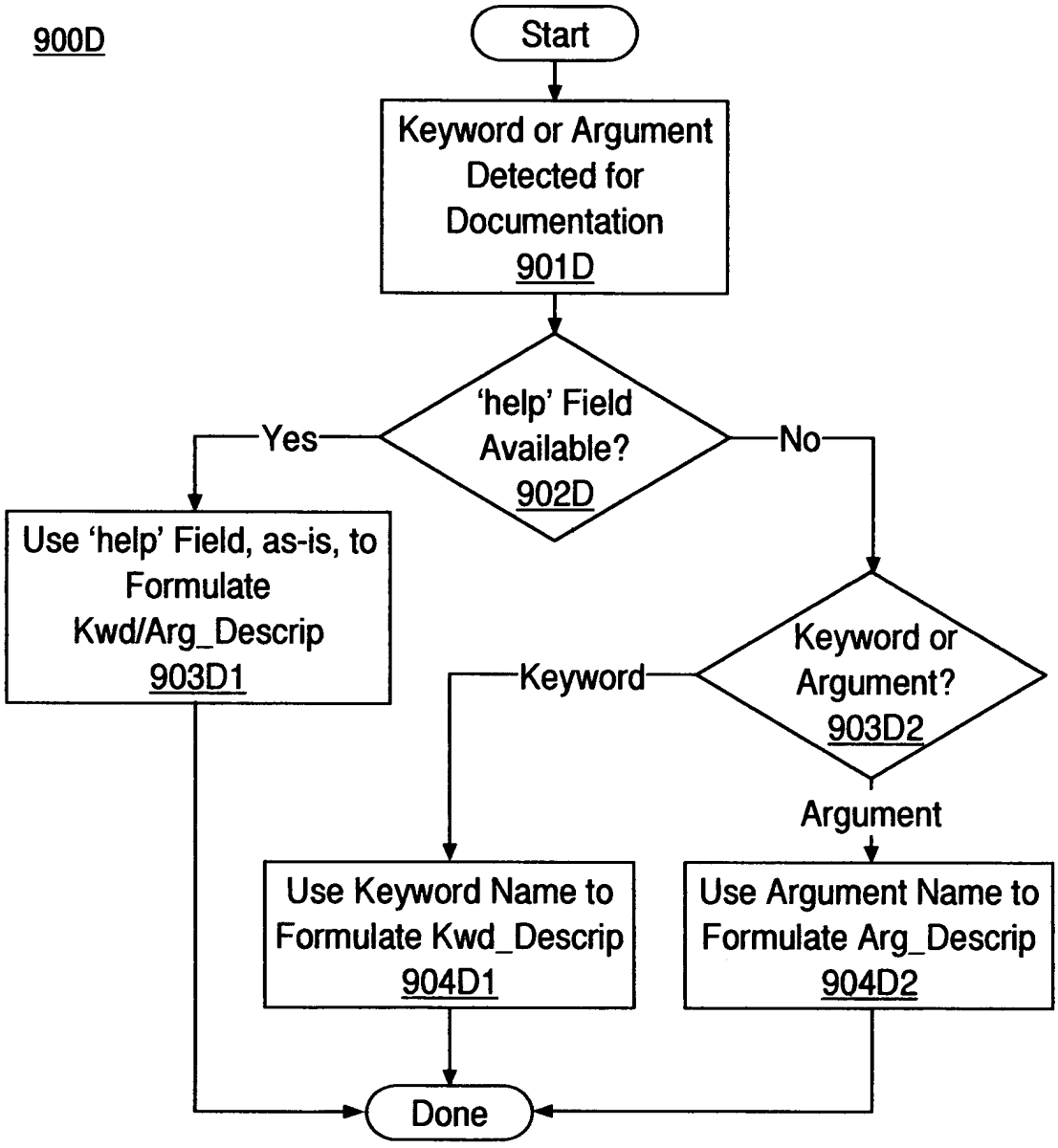
900D
Start
Keyword or Argument Detected for Documentation 901D
'help' Field Available? 902D
Yes
No
Use 'help' Field, as-is, to Formulate Kwd/Arg_Descrip 903D1
Keyword or Argument? 903D2
Keyword
Argument
Use Keyword Name to Formulate Kwd_Descrip 904D1
Use Argument Name to Formulate Arg_Descrip 904D2
Done

Fig. 9D

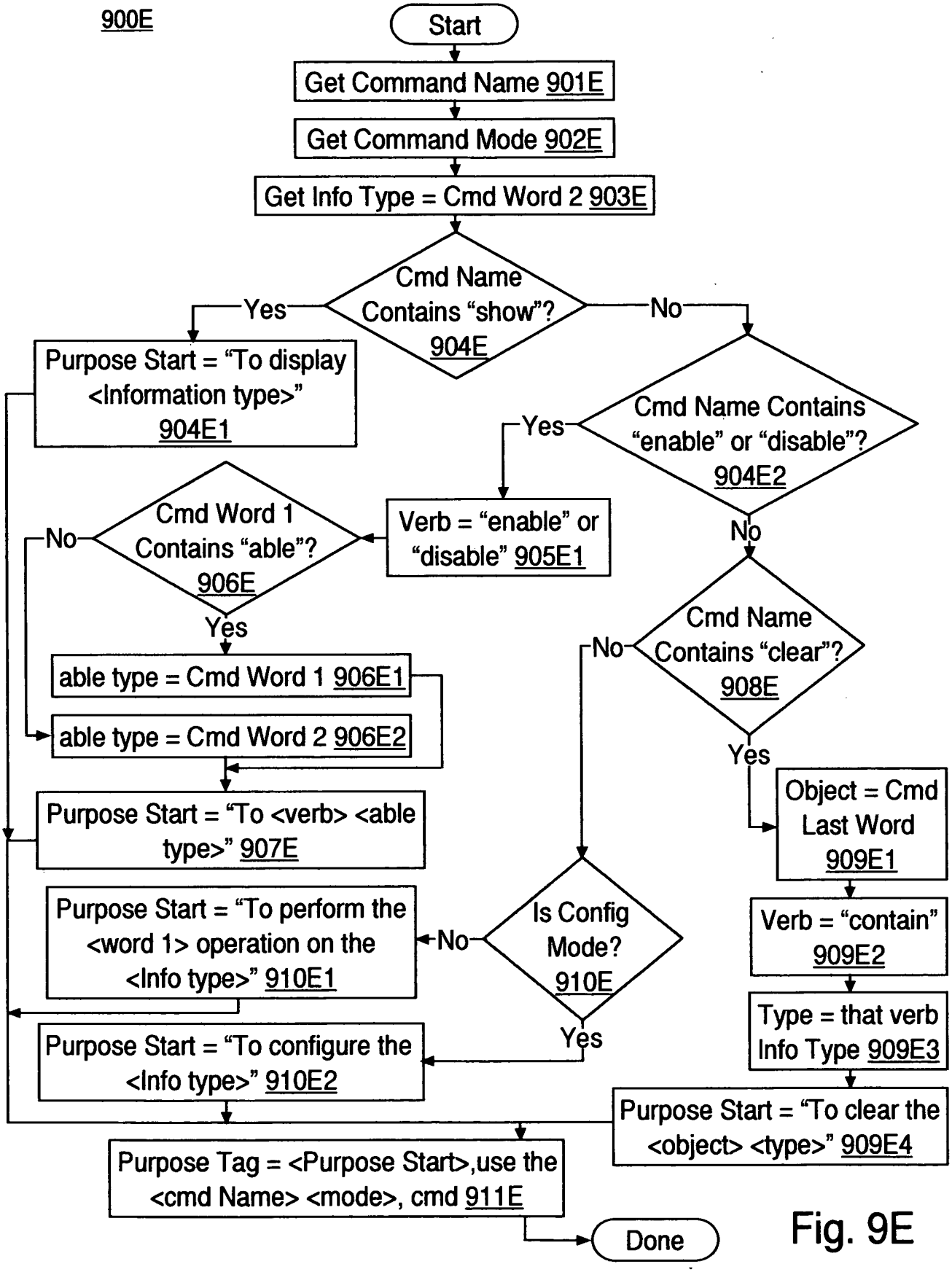
900E
Start
Get Command Name 901E
Get Command Mode 902E
Get Info Type = Cmd Word 2 903E
Cmd Name Contains "show"? 904E
Yes
No
Purpose Start = "To display <Information type>" 904E1
Cmd Name Contains "enable" or "disable"? 904E2
Yes
No
Verb = "enable" or "disable" 905E1
Cmd Word 1 Contains "able"? 906E
No
Yes
able type = Cmd Word 1 906E1
able type = Cmd Word 2 906E2
Purpose Start = "To <verb> <able type>" 907E
Cmd Name Contains "clear"? 908E
No
Yes
Object = Cmd Last Word 909E1
Verb = "contain" 909E2
Type = that verb Info Type 909E3
Purpose Start = "To clear the <object> <type>" 909E4
Is Config Mode? 910E
No
Yes
Purpose Start = "To perform the <word 1> operation on the <Info type>" 910E1
Purpose Start = "To configure the <Info type>" 910E2
Purpose Tag = <Purpose Start>,use the <cmd Name> <mode>, cmd 911E
Done

Fig. 9E

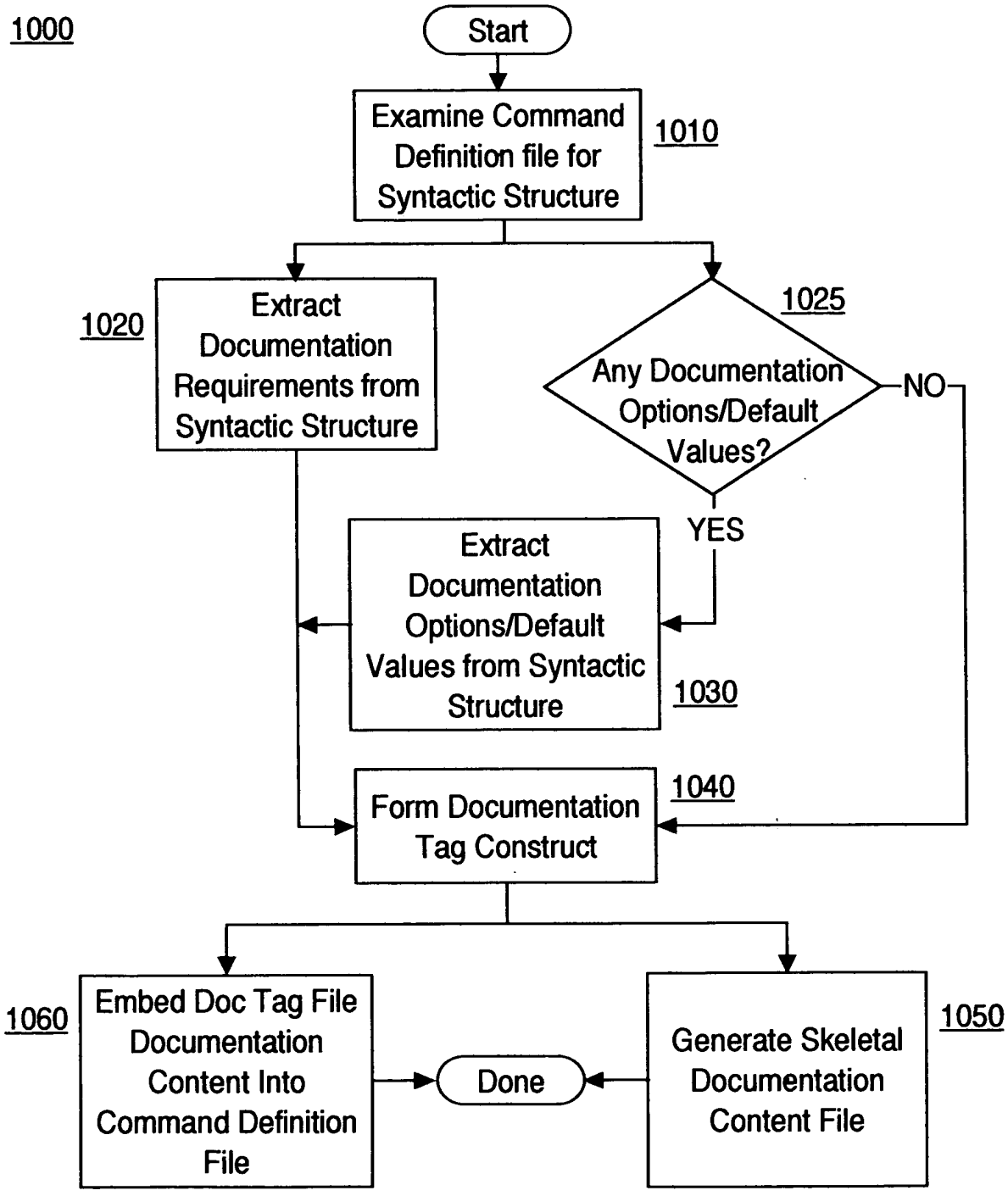
1000
Start
Examine Command Definition file for Syntactic Structure
1010
1020
Extract Documentation Requirements from Syntactic Structure
1025
Any Documentation Options/Default Values?
NO
YES
Extract Documentation Options/Default Values from Syntactic Structure
1030
Form Documentation Tag Construct
1040
1060
Embed Doc Tag File Documentation Content Into Command Definition File
Done
Generate Skeletal Documentation Content File
1050

Fig. 10

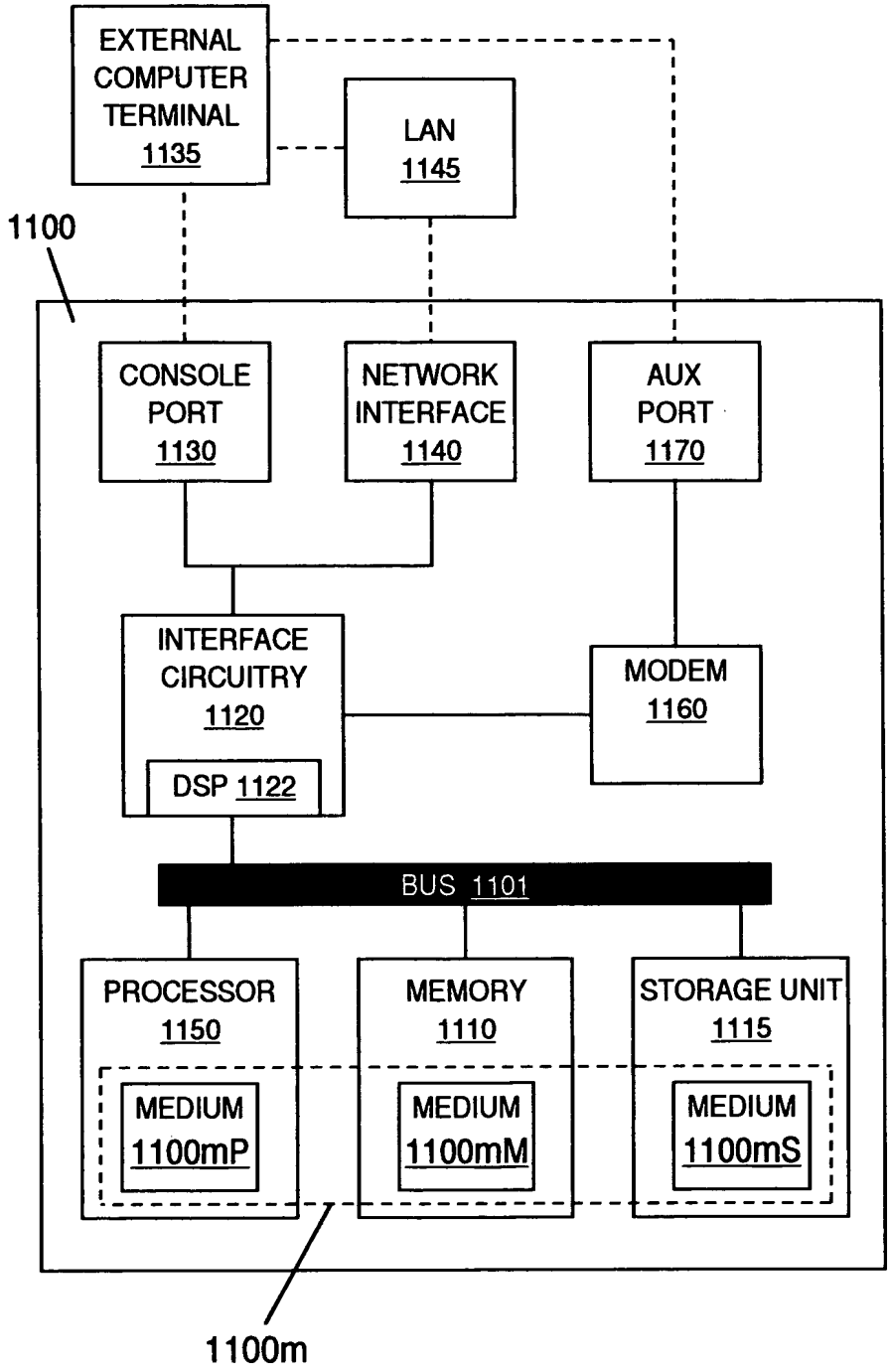
EXTERNAL COMPUTER TERMINAL 1135
LAN 1145
1100
CONSOLE PORT 1130
NETWORK INTERFACE 1140
AUX PORT 1170
INTERFACE CIRCUITRY 1120
DSP 1122
MODEM 1160
BUS 1101
PROCESSOR 1150
MEMORY 1110
STORAGE UNIT 1115
MEDIUM 1100mP
MEDIUM 1100mM
MEDIUM 1100mS
1100m

Fig. 11